

LISTING OF THE CLAIMS

1. (Previously Presented): A method for objectively monitoring a noise level occurring in a product during use comprising the steps of:

imparting energy to the product to simulate an in use condition of the product;

measuring the sound level emitted from the product;

establishing a threshold metric based on a sound level;

generating an objective metric based on the measured sound level includes the steps of acquiring sound data for a defined time period, and computing an objective metric based on an N10 loudness scale from the acquired sound data;

comparing the objective metric with the threshold metric; and

generating feedback, the feedback including information relating to the comparison of the objective metric and the threshold metric.

2. (Original): A method for objectively monitoring a noise level as set forth in claim 1 including the steps of:

determining when the objective metric exceeds threshold metric;

when the objective metric exceeds the threshold metric subjectively evaluating the noise emitted from the product to diagnose the reason for the objective metric exceeding the threshold metric; and

performing any repairs necessary to the product such that the noise level of the product meets acceptable noise level standards.

3. (Cancelled).

4. (Original): A method for objectively monitoring a noise level as set forth in claim 1 wherein the step of establishing a threshold metric includes the steps of:

selecting a product that meets allowable noise level standards and measuring the sound level of said selected product; and

using the measured sound level of the selected product to compute a threshold metric based on an N10 loudness scale.

5. (Original): A method for objectively monitoring a noise level as set forth in claim 1 including the steps of:

saving information related to the objective metric and the threshold metric;

performing statistical processing based on the saved information; and

preparing reports based on the saved information.

6. (Original): A method for objectively monitoring a noise level as set forth in claim 2 including the step of preparing at least one report as part of the step of generating feedback, said report providing information relating to repair information.

7. (Original): A method for objectively monitoring the noise level as set forth in claim 1 including the steps of:

documenting any diagnosis and repair relating to the product;

determining the most common cause of noise in the product; and

providing possible suggestions to improve the product by reducing overall noise levels.

8. (Previously Presented): A method for objectively monitoring a noise level as set forth in claim 2 including the step of documenting, using a standardized list of descriptors, the cause of the noise and any necessary repairs to the product.

9. (Original): A method for objectively monitoring a noise level as set forth in claim 8 wherein the standardized list corresponds to known warranty code parameters.

10. (Original): A method for objectively monitoring the sound level of vibration induced sounds on a vehicle comprising the steps of:

placing a sound recording instrument in a position with respect to the vehicle to record sound emitted from the vehicle;

connecting the sound recording instrument to a data acquisition apparatus;

vibrating the vehicle and using the data acquisition apparatus to record the vibration induced sound;

measuring the level of the vibration induced sound and computing an objective metric; and

comparing the objective metric with a threshold metric.

11. (Original): A method for objectively monitoring the level of vibration induced sound on a vehicle as set forth in claim 10 wherein the objective metric and the threshold metric are based on a N10 loudness scale.

12. (Original): A method for objectively monitoring the level of vibration induced sound on a vehicle as set forth in claim 10 wherein said step of comparing the objective metric with a threshold metric includes the steps of:

evaluating the comparison of the objective metric with the threshold metric to determine whether the vibration induced sound level in the vehicle is unacceptable;

when the evaluation indicates that the sound level is unacceptable, diagnosing the vehicle to determine the source of the unacceptable sound level;

performing an appropriate repair; and

confirming that the unacceptable sound level is no longer present.

13. (Previously Presented): A method for objectively monitoring the level of vibration induced sound on a vehicle as set forth in claim 12 including the step of documenting the diagnosis and repair.

14. (Original): A method for objectively monitoring the level of vibration induced sound on a vehicle as set forth in claim 12 including the step of using a graphical user interface and standardized list of descriptors to input into the data acquisition apparatus information pertaining to the diagnosis and repair.

15. (Original): A method for objectively monitoring the level of vibration induced sounds on a vehicle as set forth in claim 13 including the step of inputting into the data acquisition apparatus information pertaining to the diagnosis and repair.

16. (Original): A method of objectively monitoring the level out of vibration induced sound on a vehicle as set forth in claim 12 including the steps of:

- saving data relating to each vehicle tested including, the objective metric, threshold metric, and any diagnosis and repair; and
- performing a statistical analysis on the saved data.

17. (Original): A method for objectively monitoring the level of vibration induced sound on a vehicle as set forth in claim 12 including the steps of:

- saving data relating to each vehicle tested including, the objective metric, threshold metric, and any diagnosis and repair;
- performing statistical processing on the saved data;
- generating feedback based on the statistical processing;
- reviewing the feedback to determine repair information; and
- using said feedback to develop corrective action to reduce the level of vibration induced sound.

18. (Original): A method of objectively monitoring the sound level occurring in a vehicle during operation comprising the steps of:

- placing a sound recording instrument within the vehicle;
- connecting sound recording instrument to a data acquisition apparatus;
- measuring and recording the sound level emitted from the vehicle during operation;
- computing an objective metric based on the recorded sound level;

subjectively evaluating the vehicle to determine the source of the sound emitted from the vehicle when the objective metric exceeds a threshold metric; and
if necessary, repairing the vehicle to reduce the sound to an acceptable level.

19. (Original): A method of objectively monitoring the sound level occurring in a vehicle during operation as set forth in claim 18 wherein the objective metric and the threshold metric are based on a N10 loudness scale.

20. (Original): A method of objectively monitoring the sound level occurring in a vehicle during operation as set forth in claim 18 including the steps of:

- documenting the evaluation and repair;
- saving data relating to each vehicle tested including, the recorded sound level, the objective metric, threshold metric, the evaluation and any repair;
- performing statistical processing on the saved data;
- generating feedback information based on the statistical processing; and
- using said feedback to develop corrective action to reduce the sound level in the vehicle.